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EXAMINER

SOL, ANTHONY M

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/026,690
Filing Date: December 27, 2001
Appellant(s): DE CNODDER ET AL.

Mark E. Wallerson
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/23/2008 appealing from the Office action mailed 11/15/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. However, the appellant stated that the date of the final rejection is November 15, 2008. The date should be November 15, 2007.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,147,970	TROXEL	11-2000
6,748,435	WANG	6-2004
5,367,523	CHANG	11-1994

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-10, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troxel (US Pat. 6,147,970) (hereinafter "Troxel") in view of Wang et al. (US Pat. 6,748,435) (hereinafter "Wang").

Regarding claims 1, 8, 15 and 16,

Troxel shows in fig. 11 holding a threshold value 102 or 104 depending on whether the packet was conforming or non-conforming in the first stage 88 for an aggregate token counter N 100 (claimed *traffic reservation parameter*), said threshold

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value lying between said minimum and said maximum value (col. 20, lines 42-44) of said traffic reservation parameter (col. 20, line 37 to col. 21, line 12),

Troxel discloses an aggregate token counter 100 (claimed *traffic reservation parameter*) that is associated with an aggregate headroom threshold value 104 (claimed *threshold value*), in which a packet that was marked non-conforming in first stage policing 88 (FIG. 10) may be marked as conforming (claimed *marking each of said packets*) by comparing the number of tokens the packet requires to aggregate token counter 100 minus aggregate headroom threshold value 104 (claimed *based on the actual value of the traffic reservation parameter*). Troxel further discloses that if there are enough tokens, then the packet may be marked conforming at 106 (claimed *if the actual value of the traffic reservation parameter exceeds the threshold value for said traffic reservation parameter, determining the packet marking*)(see Troxel, col. 21, lines 3-12).

Troxel discloses that whether to mark the packet as non-conforming is based on which threshold value is used in comparing to the number of tokens required to pass that packet, and low priority packets are compared to the value counter 90 minus the normal priority threshold value 94, whereas high priority packets are compared to the direct value of token counter 90. Therefore, marking the packet as non-conforming is based on the priority of the packet since the priority is what determines the threshold value used in the comparison (claimed *determining the packet marking of and marking each of the packets based on a pre-assigned priority of the packet*). Troxel further discloses that when either type of packet is below the compared value (i.e., there are

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not enough tokens to send it), it is marked as non-conforming (claimed *if the actual value of the traffic reservation parameter is below the threshold value for the traffic reservation parameter*) and depending on the policing mode, non-conforming packets may be dropped at this point (see Troxel, col. 20, lines 46-55).

Troxel does not explicitly disclose metering said actual value of said traffic reservation parameter.

Wang teaches measuring the token bucket level (claim 1, 3rd element, token level indicator).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to include in Troxel a token bucket level measurement as taught by Wang for the purpose of determining whether to mark packet based on the available bandwidth (bucket level).

3. Regarding claims 2 and 9,

Troxel does not disclose one additional pre-assigned priority for each said packet.

Wang discloses a differentiated services code point (DSCP) by a traffic conditioning marker with one class of service called expedited forwarding (EF), which is ideal for real-time services such as IP telephony, video conferences, and other real-time applications (claimed pre-assigned priority). Chang further discloses that real-time services would be allocated only a small percentage of network capacity and would be assigned to a high-priority queue in the routers (suggests threshold)(col. 2, lines 11-61).

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It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the marking determining method of Troxel so that an additional pre-assigned priority such as for EF class having a threshold value assigned to limited network capacity as disclosed by Wang. One skilled in the art would have been motivated to make the combination to balance the need for QoS assurances for real-time applications with the limited network resources allocated for them versus network resources allocated for non-real time traffic (col. 2, lines 35-39).

4. Regarding claims 3 and 10,

Troxel further discloses the reservation traffic parameter is the filling level of a token bucket (figures 9 and 10); Wang (figure 6, r bits/sec).

5. Regarding claims 5 and 12,

Wang further discloses the pre-assigned priority is a packet loss priority (column 2, lines 59-61).

6. Regarding claims 6 and 13,

Troxel further discloses the pre-assigned priority is the packet traffic category (column 2, lines 45-49).

7. Regarding claims 7 and 14,

Wang further discloses the pre-assigned priority is a type of service (column 3, lines 7-13).

8. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Troxel in view of Wang, and in further view of Chang et al. (US Pat. 5,367,523) (hereinafter "Chang").

Regarding claims 4 and 11,

Troxel and Wang do not teach the reservation traffic parameter is the sending rate estimate. However, Chang discloses that the sending rate is used as the green token source rate (column 9, lines 22-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the reservation traffic parameter as the sending rate estimate for the purpose of controlling the congestion in the communication network.

(10) Response to Argument

Appellant's arguments in the Brief filed 6/23/2008 have been fully considered but they are not persuasive.

- On pgs. 11-12, the Appellant contends that Troxel does not teach or suggest that *if the actual value of the traffic reservation parameter exceeds the threshold value for said traffic reservation parameter, determining the packet marking of and marking each of said packets based on the actual value of the*

- traffic reservation parameter, and if the actual value of the traffic reservation parameter is below the threshold value for the traffic reservation parameter, determining the packet marking of and marking each of the packets based on a pre-assigned priority of the packet, as required by the claims.*
- The Examiner respectfully disagrees. As for the limitation “*if the actual value of the traffic reservation parameter exceeds the threshold value for said traffic reservation parameter, determining the packet marking of and marking each of said packets based on the actual value of the traffic reservation parameter,*” Troxel discloses an aggregate token counter 100 (claimed *traffic reservation parameter*) that is associated with an aggregate headroom threshold value 104 (claimed *threshold value*), in which a packet that was marked non-conforming in first stage policing 88 (FIG. 10) may be marked as conforming (claimed *marking each of said packets*) by comparing the number of tokens the packet requires to aggregate token counter 100 minus aggregate headroom threshold value 104 (claimed *based on the actual value of the traffic reservation parameter*). Troxel further discloses that if there are enough tokens, then the packet may be marked conforming at 106 (claimed *if the actual value of the traffic reservation parameter exceeds the threshold value for said traffic reservation parameter, determining the packet marking*)(see Troxel, col. 21, lines 3-12).

As for the limitation "*if the actual value of the traffic reservation parameter is below the threshold value for the traffic reservation parameter, determining the packet marking of and marking each of the packets based on a pre-assigned priority of the packet,*" Troxel discloses that whether to mark the packet as non-conforming is based on which threshold value is used in comparing to the number of tokens required to pass that packet, and low priority packets are compared to the value counter 90 minus the normal priority threshold value 94, whereas high priority packets are compared to the direct value of token counter 90. Therefore, marking the packet as non-conforming is based on the priority of the packet since the priority is what determines the threshold value used in the comparison (claimed *determining the packet marking of and marking each of the packets based on a pre-assigned priority of the packet*). Troxel further discloses that when either type of packet is below the compared value (i.e., there are not enough tokens to send it), it is marked as non-conforming (claimed *if the actual value of the traffic reservation parameter is below the threshold value for the traffic reservation parameter*) and depending on the policing mode, non-conforming packets may be dropped at this point (see Troxel, col. 20, lines 46-55). Furthermore, Troxel discloses to "allow a packet and mark it non-conforming (tagging)..." (see Troxel, col. 18, line 10) and further discloses the policing mode table entry of "Pol_Tag Tag non-conforming packets, based on priority" (see Troxel, col. 18, line 30). The proceeding disclosure clearly states that

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tagging non-conforming packets are based on priority. Troxel further explains that "[a] packet becomes non-conforming when its size exceeds the mtu parameter, or the token bucket has insufficient tokens...There are three cases, depending on (claimed based on) the packet priority and non-conforming status..." (see Troxel, col. 18, lines 12-15) and shows a table which includes cases for "low priority" and "high priority." (see Troxel, col. 18, lines 19-21). Therefore, Troxel clearly discloses that packets are marked non-conforming based on/depending on the priority.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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